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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/228,954	01/12/1999	ALONZO M. BURNS JR.	971286A	7883

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EXAMINER

JUSKA, CHERYL ANN

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 03/25/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-21

Office Action Summary

Application No.

09/228,954

Applicant(s)

BURNS ET AL

Examiner

Cheryl Juska

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-34,58-61 and 63-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-34,58-61 and 63-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 23, 24, 26-28, and 63 have been considered but are moot in view of the new ground(s) of rejection. However, the following comments are made with respect to Applicant's arguments to the extent that said arguments relate to the new rejection presented below.
2. With respect to the rejection of claims 25, 64, and 65, Applicant traverses the Examiner's Official Notice and argues that modular carpet tiles and broadloom carpets have different constructions and properties. As such, Applicant asserts that Tarkett's reference to carpets does not inherently include all forms of carpets nor would all forms of carpets be obvious over said reference (Remarks, page 5-6). In response, it is reiterated that in a broad sense, the term "carpet" inherently encompasses different types of carpet. Additionally, it is reasserted that it would have been obvious to one skilled in the carpet art to employ the inventive plastisol carpet backing of Tarkett to known conventional forms of carpet.

Applicant has required the Examiner to provide evidence of the Official Notice given, which shows 'the interchangeability of the various forms of carpets' (Remarks, page 6). In response, it is noted that Official Notice was given for the mere fact that broadloom, carpet tiles, and wide roll carpet are conventional forms of carpet, rather than for the interchangeability of the various forms of carpet as asserted by Applicant. Also, it is asserted that PVC plastisol backings are known to be applicable to each of these carpet types despite the differences in the final structure of said carpet types.

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In response to Applicant's argument that Tarkett's reference to carpets is with respect to Example 1, which is a latex composition rather than the plastisol composition (Remarks, paragraph spanning pages 6-7), it is asserted that Tarkett's teaching of coating a carpet backing with a foam latex having microspheres (Example 1B) is extendable to Tarkett's teaching of a plastisol foam coating having microspheres (Example 2B). Additionally, it is noted that the DERWENT abstract for the cited Tarkett reference teaches that both the latex and PVC foams are suited for coating onto carpets.

In response to Applicant's traversal of claims 32-34, 58, 59, and 61 (Remarks, page 9-10), it is reiterated that incorporation of blow agents is a known alternate technique to mechanical frothing for producing foams. This is clearly evidenced by the cited Joslyn patent. The choice of method of foaming, as well as the expansion rate of the foam, is well within the skill of one in the carpet art.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 23, 24, 26-28, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1 151 521 assigned to Tarkett AB, in view of in view of J. Levinstein's The Complete Carpet Manual, page 27, L. Shoshkes' Contract Carpeting, Chapter 4, pages 60-67, and US 5,545,276 issued to Higgins, and in further view of US 5,658,969 issued to Gerace.

[Said rejection is analogous to that presented in the last Office Action, with the exception that the Gerace reference has been substituted for Christy (US 5,607,993).]

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Tarkett discloses a foam material suited for carpet backings (page 2, lines 20-23). The foam material may be a polyvinyl chloride (PVC) plastisol (page 1, lines 12-20). Included in the foam material are microspheres of alumina silicate (page 1, lines 39-51).

Tarkett does not explicitly teach the presently claimed primary backing, adhesive pre-coat, intermediate backing layer, or reinforcement layer. However, these layers are well-known in the art of carpet, as is evidenced by the cited Levinstein, Shoshkes, and Higgins references. For example, Levinstein teaches a conventional carpet is constructed of (a) face fibers tufted into a primary backing, (b) a backcoat of adhesive applied thereto to seal said fibers to said primary backing, and (c) a secondary backing for dimensional stability (Levinstein, diagram on page 27). Additionally, Shoshkes discloses a like carpet construction at Figure 34, page 61. Shoshkes also teaches that many carpets conventionally have an attached cushion, or foam backing (page 65 of Shoshkes). Furthermore, Higgins discloses a carpet comprising (a) a pile layer, (b) a primary backing, (c) an adhesive backcoat, (d) an adhesive layer for attaching (e) a reinforcement layer, (f) a foam layer, and (g) a secondary backing. Therefore, it would have obvious to one of ordinary skill in the art to employ an adhesive or pre-coat to the primary backing and to apply a secondary or intermediate backing thereto before applying the inventive foam backings. Motivation to do so would be to securely bond the pile fibers into the primary backing and to add dimensional stability to said carpet.

Thus, the combined art of Tarkett, Levinstein, and Shoshkes ^{+ Higgins} teach the presently claimed invention of claims 23, 24, 26-28, and 63 with the exception that the microspheres are polymeric. However, it is asserted that polymeric microspheres are a well-known alternative to ceramic microspheres. For example, Gerace PVC plastisol coatings and adhesives having hollow

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thermoplastic microspheres therein (abstract, col. 1, lines 22-24, and col. 21, line 48). Gerace additionally teaches the use of thermoplastic microspheres lower the coating density and increase toughness and impact resistance compared to the use of glass, silica, or phenolic microspheres (col. 1, line 51-col. 2, line 24). Thus, it would have been obvious to one of ordinary skill in the art to substitute polymeric microspheres for the ceramic microspheres of the Tarkett invention, with the expectation of improved impact resistance and toughness while reducing the density of the foam backing even more. Therefore, claims 23, 24, 26-28, and 63 are rejected as being obvious over the cited prior art.

5. Claims 25, 64, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Tarkett, Levinstein, Shoshkes, and Gerace references, as applied to claim 23 above.

Although the cited art does not explicitly teach broadloom carpet, modular carpet tile, or wide roll carpet, these types of carpet are well-known in the carpet industry. Applicant is hereby given Official Notice that broadloom, carpet tiles, and wide roll carpet are the conventional forms of carpet. Thus, it is asserted that the Tarkett disclosure to "carpets" inherently includes the claimed types of carpet. In the alternative, it would have been obvious to one of ordinary skill in the art to employ the invention of Tarkett in the known conventional forms of carpet, motivated by the application of the inventive foam backing to standard carpet production lines. Therefore, Applicant's claims 25, 64, and 65 are rejected as being obvious over the cited prior art.

6. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Tarkett, Levinstein, Shoshkes, and Gerace references, as applied to claim 23 above.

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Although the cited art does not explicitly teach the claimed carpet density, it is reasonable to presume that a carpet made according to said art would meet the density range claimed by the Applicant. Support for said presumption is found in the use of similar materials (i.e., carpet face fibers, primary backing, and thermoplastic foam backing with microspheres and a plasticizer) and the like end-products (i.e., a carpet with a microsphere-filled foam backing). Therefore, claims 29 and 30 are rejected.

7. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Tarkett, Levinstein, Shoshkes, and Gerace references, as applied to claim 23 above.

The prior art does not explicitly teach delamination values. However, it is asserted that the a carpet made according to the cited prior art would meet the presently claimed delamination value, since the prior art carpet meets the structural and compositional limitations of the instant invention. Hence, claim 31 is rejected.

8. Claims 32-34, 58, 59, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Tarkett, Levinstein, Shoshkes, and Gerace references, and in further view of US 3,708,441 issued to Joslyn et al.

Said claims limit the thermoplastic backing to have an activated blowing agent. Although Tarkett does teach a foam backing, a frothing technique (i.e., mechanical whipping) is employed to produce said foam. However, the use of blowing agents is a well-known equivalent technique for producing foams. Specifically, Joslyn teaches three conventional methods of foam formation: (a) use of blowing agents, (b) bubbling gas, and (c) frothing (col. 1, lines 48-58). Thus, the selection of any of these known equivalents (i.e., blowing agents and gas bubbling) to frothing would be within the level of ordinary skill in the art.

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With respect to the limitation of claim 59, wherein the foam expansion rate is recited, it is asserted that the amount of expansion is dependent upon process parameters, such as amount of blowing agent present, temperature, pressure, etc. Thus, the claimed expansion rate would have been obvious to one skilled in the art since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215. Therefore, claims 32, 34, 58, 59, and 61 are rejected as being obvious over the cited prior art.

9. Claims 66 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Tarkett, Levinstein, Shoshkes, and Gerace references. Claim 67 rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Tarkett, Levinstein, Shoshkes, Gerace, and Joslyn references and in further view of US 3,819,463 issued to Ervin and page 362 of Rodriguez's *Principles of Polymer Systems*, 2nd ed.

The cited prior art does not explicitly teach whether the foams are closed or open cell foams. However, it is asserted that a closed cell foam is obvious over the cited prior art. For example, Ervin teaches a foam backing formed by foaming the backing composition between spaced platens in a press or parallel belts in order to obtain a constant thickness (col. 2, lines 64-67 and col. 3, lines 37-45). As evidenced by page 362 of Rodriguez's *Principles of Polymer Systems*, 2nd ed., "closed-cell foams are typically produced in processes where some pressure is maintained during the cell-formation process." Thus, producing a closed cell foam would have been a result of the obvious process for maintaining a constant backing thickness. Therefore, claims 66-68 are rejected as being anticipated by the cited art.

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Cheryl Juska whose telephone number is 703-305-4472. The Examiner can normally be reached on Monday-Friday 10am-6pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



CHERYL A. JUSKA
PRIMARY EXAMINER

cj
March 19, 2002